



SUBMISSION

on

**Review on whether emissions from international shipping and aviation
should be included in the 2050 target, and if so how**

to

He Pou a Rangi, Climate Change Commission

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About the Fertiliser Association of New Zealand

The Fertiliser Association of New Zealand is an industry association funded by member companies to address issues of common public good. Member companies include Ballance Agri-Nutrients Ltd and Ravensdown Ltd. Both are farmer co-operatives with some 35,000 farmer shareholders. Between them, our members supply the majority of fertiliser used in New Zealand. As co-operatives, they are driven by delivering best value to farmer shareholders rather than maximising the value of product sales.

The Association member companies have invested significantly in products, systems and procedures which support responsible nutrient management to enable a viable primary industry within environmental limits.

The Association submits on national policy and regulation, with the view that policy and regulation should be enabling, and that controls are both appropriate and necessary while providing for sustainable primary production.

The Fertiliser Industry is committed to supporting New Zealand's 2050 net zero emissions target and to enabling its farmer shareholders to achieve their ambitions in environmental management including reduction of agricultural greenhouse gas emissions.

Introduction

We have focused our submission on the potential to include international shipping in New Zealand's domestic carbon targets.

We have discussed policy commitments to emissions reduction in the context of:

- shipping emissions as a component of overall emissions from agricultural products
- supply chain risk for New Zealand
- current port infrastructure issues
- international policy and shipping company initiatives to address vessel emissions.

Sea freight enables 99% of New Zealand's imports and exports annually, and underpins product cost and competitiveness. Access to international shipping is critical to New Zealand's agriculturally based economy. It is in New Zealand's interest to support initiatives that support more efficient and greener shipping. At the same time New Zealand has risks, because of its remoteness, that need to be carefully considered before embracing any policy changes.

Understanding the role of shipping in the estimation of emissions from agricultural products

Increasingly market expectations of estimating the footprint of agricultural products include a cradle-to-grave approach, including those associated with shipping raw materials to New Zealand.

The Association was an early investigator of greenhouse gas emissions associated with fertiliser products sold in New Zealand, including those associated with shipping. The Association commissioned AgResearch to estimate the carbon footprint of fertiliser used on farms in 2019 and 2010.¹ The 2019 analysis showed a reduction in emissions associated with shipping reflecting the increased emissions efficiency of shipping over this period.

Such footprint analysis now supports reporting against climate commitments by Ravensdown, and through SBTi FLAG based targets adopted by Fonterra and Silver Fern Farms. However emissions estimation initiatives are increasingly challenged by the duplication of emission measurement and reporting systems.

¹ Update of the carbon footprint of fertilisers used in New Zealand Stewart Ledgard and Shelley Falconer August 2019, <https://www.fertiliser.org.nz/Site/research/projects/update-of-the-carbon-footprint-of-fertilisers-used-in-new-zealand.aspx>

Supply chain resilience

New Zealand is a beneficiary of global interconnectivity enabling domestic prosperity. However such integration has created some supply chain weaknesses for New Zealand which need careful management.

A key focus for our member co-operatives is managing supply chains to enable the manufacture and sale of fertiliser products that meet the needs of New Zealand farmers. Geopolitical change and supply disruption has highlighted the vulnerability of fertiliser supply chains. Tariffs, sanctions, export controls, civil unrest, alongside port congestion and shipping, all impact on supply.



New Zealand does not have a domestic supply of the mineral resources needed for fertiliser manufacture. The lack of resources means we are uniquely vulnerable to the need to ship nutrient raw materials from across the world. As a nation whose economy is dependent on growing food, we are unique globally in our heavy dependence on imports for the raw materials to grow food. These raw materials and products are not substitutable, and supplies are often concentrated. Phosphate rock, potash, trace elements, and sulphur (since the closure of Marsden Point), are import dependent.

Similarly, access to international markets for New Zealand agricultural products is dependent on access to efficient and cost-competitive shipping.

As a 'last bus-stop' island nation, distant from key trading partners, the economic growth and prosperity of New Zealand depends on the performance of the supply chains that move goods from end to end. The availability of efficient shipping is a key element of supply chain resilience.

Port capacity and infrastructure

Existing infrastructure capacity and suitability issues at ports are exacerbated by the need to address greenhouse gas emissions from international shipping. In the future there is a risk that New Zealand importers and exporters will be unable to charter green shipping because of the inability to dock and refuel at New Zealand ports.

Capacity issues at ports and resultant congestion, are likely to be increasingly challenged by New Zealand's growing population, increased trade, and future changes in the size and needs of international shipping. Our ports need to be highly productive to keep shipping lines coming here.

In order to cater for future growth, alleviate current congestion in the supply chain, build port network resilience, and to be prepared for the next generation of green shipping, investment is needed in port capacity-building. Extending existing berth capacity, increased automation, and alternative fuel cargo handling facilities are all critical.

Existing infrastructure problems are likely to be exacerbated as international shipping fleets deploy increasingly bigger vessels. The Transport Outlook report (Te Manatu Waka, Ministry of Transport - *Transport Outlook: Future State* report, 2017) envisioned a world where international shipping companies seek to send larger freight vessels to fewer New Zealand ports driving increased competition between ports and a need for significant investment in port infrastructure.

Rautaki Hanganga o Aotearoa, the New Zealand Infrastructure Strategy (2022) sets out a thirty-year road map for improving the efficiency and security of freight and the national supply chain. The *New Zealand Freight and Supply Chain Issues Paper (2022)* identified the need for generational investment.

Prior to consideration of a domestic target, the Commission should consider what conditions would need to be in place for New Zealand to attract low emissions vessels in the future. This could include opportunities for producing low emissions fuels, and the port infrastructure needed to support larger, low-emissions vessels.

Structure of international shipping

International shipping is dominated by a small number of players with substantive fleets. MSC, Maersk, CMA CGM, COSCO and Hapag-Lloyd alone are responsible for about 20% of international shipping emissions (Statista). Of the major shipping companies, Maersk, CMA CGM, Hapag-Lloyd, ONE,

Evergreen, YangMing, and Mitsui have committed to being net zero carbon either before or by 2050. Others such as COSCO, while not making a quantitative commitment to carbon reduction have committed to investment in technology development. MSC have committed to halving emissions by 2050. According to Statista, as of August 2022, half of the 30 largest shipping companies had pledged to reach net zero GHG emissions by 2050, or follow the IMO strategy to reduce GHG emissions.

Generally, these carbon commitments involve a 'well to wake' approach – covering fuel production, delivery to ships, and onboard emissions. This is a more comprehensive approach to emissions assessment than simply considering the emissions associated with onboard fuel use.

International Maritime Organisation

The International Maritime Organisation's (IMO) work on carbon emissions associated with shipping is particularly significant for New Zealand (*Strategy on Reduction of GHG Emissions from Ships, 2018*). The direction set will likely increase shipping costs and could have a particularly adverse impact given our geographic remoteness. The Strategy focuses on both reducing the carbon intensity and absolute GHG emissions from international shipping. Measures include improvements to the existing international fleet, reduction of emissions at port, and use of alternative low-carbon and zero-carbon fuels.

Member States have now adopted the 2023 IMO *Strategy on Reduction of GHG Emissions from Ships*, with enhanced targets to tackle harmful emissions. The Strategy includes a common ambition to reach net-zero GHG emissions from international shipping by 2050, a commitment to move towards green fuels, as well as indicative checkpoints for international shipping to reach net-zero GHG emissions for 2030 and 2040.

The Strategy assumes increased efficiency leading to a reduction in carbon intensity, but also a transition towards green fuels.

The 2023 Strategy states that candidate measures should be comprised of both:

- a goal-based marine fuel standard regulating the phased reduction of the marine fuel's GHG intensity; and
- a maritime GHG emissions pricing mechanism.

While IMO targets are not legally binding, they provide a strong signal for the industry to follow and for member nations to establish supporting policies.

Since January 2023 it is mandatory for all ships to calculate their attained Energy Efficiency Existing Ship Index to measure their energy efficiency and to initiate the collection of data for the reporting of their annual operational carbon intensity indicator (CII) and CII rating.

The CII rating relates to the nautical miles sailed and varies with the operating and trade patterns of each ship. So, ballast voyages, sailing time, slow speed and optimising hull, propeller and engine conditions all help achieve a good rating, whereas long port stays have a negative impact. Accordingly long voyages are highly favourable in the CII calculations because they result in fewer voyages each year, and therefore less time in port where the ship emits CO₂ from the generators but does not accumulate miles run in the denominator of the CII equation. In short, the IMO's CII measure largely comes down to speed and route optimisation and spending less time in port. This measure is rather challenging because it requires operators to effectively limit the number of ports called on. Many further many factors – such as congestion, terminal delays and the weather – that affect the port stay duration are essentially beyond a shipping company's direct control.

Commitments on international shipping

At COP26 the *Clydebank Declaration* focussed on the establishment of green shipping corridors – with the intent of enabling partnership to invest in accelerating the decarbonisation of the shipping sector and its fuel supply through green shipping corridor projects. New Zealand aligned with 26 other countries in committing to this declaration.

At COP26, New Zealand also committed to the *Declaration on Zero Shipping Emissions by 2050*. The Declaration was a commitment to strengthen global efforts to achieve zero emissions from international shipping by 2050, including through the IMO.

The creation of green corridors, the shift to alternative low-carbon and zero-carbon fuels, larger vessels and increased operational energy efficiency could have major impacts for New Zealand.

At COP28 major commercial shipping companies also made commitments. Maersk, CMA CGM, MSC, Hapag-Lloyd, and Wallenius Wilhelmsen, issued a joint declaration calling for:

- an end to building of fossil fuel only vessels,
- an effective GHG pricing mechanism which would make green fuel competitive with black fuel
- a vessel policy option for emissions compliance, so emissions are measured across a fleet rather than based on individual ships
- and a 'well to wake' approach to considering emissions.

This declaration suggests well-developed strategy across the major shipping companies which align with the policies being developed through the IMO. With the average age of the international fleet being 15 years, there is potential for rapid change in composition and fuel type, if these commitments are actioned.

The difficulty of allocating emissions on a unilateral basis

The discussion document notes that if the government wishes to include shipping emissions within domestic targets, it will need to make decisions on how emissions are counted, and how they could be built into the structure of the 2050 target.

The discussion document is open about the challenge of applying a unilateral approach to estimating emissions associated with international shipping. Lack of clear systems to apportion responsibility for emissions associated with shipping when applied on a unilateral basis could impact on the quantification and credibility of any target. The difficulty of emissions estimates across mixed cargos, multiple port entries, and complicated schedules, all add a credibility risk.

There is also the potential for conflict between different emissions measures and ratings, such as the IMO's CII rating, the SBTi FLAG estimation methods, and any domestic assessment. Such conflicts create issues of credibility.

Potential for domestic policies on reducing carbon emissions.

The intent of the Climate Change Response Act (2002) is to provide a framework by which New Zealand can develop and implement clear and stable climate change policies and meet its international obligations under the Convention and the Protocol. It is in New Zealand's interest to have coherent policy that supports emissions reduction.

In the face of active international and commercial developments on quantification and reduction of shipping emissions, there needs to be a clear consideration of the benefits and risks of inclusion of the emissions from international shipping in our domestic targets at this time.

For emission reductions policy to be effective there needs to be clear alignment between domestic, and international policies and the commitments of individual businesses. Care is needed to avoid duplication across the range of domestic and international policies that will impact shipping to avoid cargo owners being impacted multiple times for the same initiative, or that creates disincentives.

Policies need to have impact on the generator of emissions, rather than simply impose cost on consumers.

The discussion document notes that because of the nature of the shipping sector, actions on emissions will be more effective at an international level.

The potential effectiveness (or otherwise) of any New Zealand imposed penalty on international shipping coming into New Zealand ports need to be properly evaluated. This includes the risk that a price imposed on New Zealand importers and exporters has no real impact on the decisions of vessel owners. In fact, a unique New Zealand approach to pricing could further discourage international shipping companies from coming to New Zealand ports exacerbating existing supply chain risks and potentially resulting in an increase in emissions due to not being able to secure access to the next generation of green vessels.

Consideration of any target needs to include proper consideration of potential policy options, their potential effectiveness, and costs. Timing of any commitments should align with international policy development.

The inclusion of shipping in a domestic climate target should be delayed while the IMO proposed policies on transitioning the shipping sector are developed. An alternative approach to including shipping in any domestic target, would be to accelerate development of a National Action Plan on emissions reduction from shipping.

In this regard, an IMO resolution adopted in 2020 encourages Member States to develop and submit voluntary National Action Plans to address GHG emissions from ships. It is intended that such action plans may be developed by Member States willing to initiate early actions at national level to facilitate the reduction of GHG emissions from ships without awaiting the entry into force of measures in the IMO context. The resolution suggests that the National Action Plans could include:

- improving domestic institutional and legislative arrangements
- developing activities to further enhance the energy efficiency of ships;
- initiating research and advancing the uptake of alternative low-carbon and zero-carbon fuels;
- accelerating port emissions reduction activities, such as onshore power supply, safe and efficient bunkering of alternative low-carbon and zero-carbon fuels
- incentives to promote sustainable low-carbon shipping; and support for the optimisation of port calls, capacity-building, and facilitating the development of infrastructure for green shipping.

Emissions from shipping need to be considered as a core component of the emissions from New Zealand's agricultural products. It is critical that domestic policies clearly align with international policies; that the risks and benefits to New Zealand are clearly understood, and that effective domestic policies are developed to ensure New Zealand is not left behind when international shipping starts to transition.

Concluding comment

Our view is that the inclusion of shipping in a domestic climate target should be delayed while the IMO proposed policies on transitioning the shipping sector are developed. In the interim, the development of a National Action Plan on policies and strategies to address GHG emissions from international shipping in accordance with the IMO guidelines should be accelerated. New Zealand acting alone will have limited influence on emissions reduction in international shipping, collective international action is likely to have more success.

We welcome the opportunity to provide input and are happy to discuss any of the issues raised.

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